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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/777,262 | 02/12/2004 | Craig Marshall Darsow | ROC920030333US1 | 5409 |

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| EXAMINER |
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GARBOWSKI, LEIGH M

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| ART UNIT | PAPER NUMBER |
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2825

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,262

Applicant(s)

DARSOW ET AL.

Examiner

Leigh Marie Garbowski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 9-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/12/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Specification

The disclosure is objected to because of the following informalities: the information regarding the patent application incorporated by reference should be updated [page 1, lines 6-7].

Appropriate correction is required.

Claim Objections

Claims 9-25 are objected to because of the following informalities: as per claim 9, the antecedent basis for "delay characteristics" is not clear [line 8], thus what is particularly meant by the "adjusting" step [lines 8-9] is not clear; as per claim 11, the antecedent basis for "delay characteristics" [line 10 and 20] is not clear, thus what is particularly meant by the "automatically adjusting" and "adjusting" steps [lines 10-11 and 20-21] is not clear; there is no antecedent basis for "the user-identified at least one common block" [lines 3-4]; as per claim 14, there is no antecedent basis for "slack computations" [line 6], thus what is particularly meant by "improving at least one of a plurality of" [lines 5-6] is not clear; as per claim 17, there is no antecedent basis for "the static timing tool" [line 1]; as per claim 20, there is no antecedent basis for "the static timing tool" [line 2]; as per claim 21, there is no antecedent basis for "slack computations" [line 7], thus what is particularly meant by "improving" [lines 6-8] is not clear; as per claim 25, the antecedent basis for "the slack" [line 4] is not clear; the remaining claims, though not specifically mentioned, are objected to for incorporating the above objections based upon their dependency. Appropriate correction is required.

Allowable Subject Matter

Claims 1-8 are allowed. Claims 9-25 would be allowable if the objections noted above are corrected to clarify the subject matter.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

The following is an examiner's statement of reasons for allowance: although the prior art of record discloses the subject matter described below, the prior art of record does not disclose, teach, or suggest, as per claim 1, an apparatus comprising a timing

analysis mechanism residing in the memory and executed by the at least one processor, the timing analysis mechanism allowing a user to identify in the IC design at least one common logic block through which a clock test signal and a data launch signal both pass resulting in the clock test signal and data launch signal occurring on opposite edges at a subsequent logic block, the timing analysis mechanism improving at least one of the plurality of slack computations due to the at least one common logic block, in combination with all of the features recited in total; as per claim 6, an apparatus comprising a timing analysis mechanism residing in the memory and executed by the at least one processor, the timing analysis mechanism being separate from the static timing tool and providing input to the static timing tool, the timing analysis mechanism allowing a user to identify at least one common logic block through which a clock test signal and a data launch signal both pass resulting in the clock test signal and the data launch signal occurring on opposite edges at a subsequent logic block, the timing analysis mechanism improving at least one of the plurality of slack computations due to the at least one common logic block using at least one user delta parameter to adjust the clock test signal, in combination with all of the features recited in total.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mains [U.S. Patent #5,771,375] discloses performing static timing analysis including if the test edge is opposite the edge launched by the data signal. Hathaway et al. [U.S. Patent #6,718,523 B2] disclose reducing pessimism in static timing analysis. Tom [U.S. Patent #5,210,700] discloses delay adjustment for static timing analysis including delay value and clock phase tags. Oleksinski et al. [U.S. Patent Application Publication #2004/0268279 A1] disclose static timing analysis that queries a user. Kalafala et al. [U.S. Patent Application Publication #2005/0066297 A1] disclose removing pessimism in static timing analysis. Hitchcock, Sr. discloses "Timing

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Verification and the timing Analysis Program." Zejda et al. disclose "general Framework for removal of Clock Network Pessimism." Clement et al. [U.S. Patent Application Publication #2004/0250224 A1 disclose static timing analysis using a GUI that identifies all possible sources of a clock.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Marie Garbowski whose telephone number is 571-272-1893 and e-mail is Leigh.Garbowski@uspto.gov. The examiner can normally be reached on days.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LEIGH M. GARBOWSKI
PRIMARY EXAMINER